TUBERCULOSIS

I. IDENTIFICATION

A. CLINICAL DESCRIPTION: A bacterial disease usually affecting the lungs (pulmonary TB) caused by organisms in the *Mycobacterium tuberculosis* complex (*M. tuberculosis*, *M. bovis*, *M. africanum*). Other parts of the body (extrapulmonary TB) can also be affected (e.g., brain, lymph nodes, kidneys, bones, joints, larynx, intestines, eyes). Systemic symptoms include low-grade fever, night sweats, fatigue, and weight loss. In pulmonary or laryngeal TB, there may also be hemoptysis, a persistent and productive cough, chest pain, and shortness of breath.

B. REPORTING CRITERIA: Laboratory confirmation of tuberculosis or a clinical diagnosis without laboratory confirmation.

C. KENTUCKY CASE DEFINITION: A case that meets the following for laboratory confirmation or clinical diagnosis:

1. Laboratory Confirmation by one of the following methods:

- Isolation of *M. tuberculosis* or *M. tuberculosis* complex organisms from a clinical specimen.

  Use of rapid identification techniques for *M. tuberculosis* such as DNA probes and mycolic acid high-pressure liquid chromatography (HPLC) performed on a culture from a clinical specimen are acceptable under this criterion.

- Demonstration of *M. tuberculosis* from a clinical specimen by nucleic acid amplification test.

  Nucleic acid amplification (NAA) tests must be accompanied by culture for mycobacteria species. However, for surveillance purposes, CDC will accept results obtained from nucleic acid amplification (NAA) tests approved by the FDA and used in accordance with the approved product labeling on the package insert. Current FDA approved NAA tests are only approved for smear-positive respiratory specimens. The NAA test used by the Kentucky Public Health laboratory is the Microbacterium Tuberculosis Direct (MTD).

- Demonstration of acid-fast bacilli in a clinical specimen when a culture has not been or cannot be obtained. This criterion has most commonly been used to diagnose tuberculosis in the post mortem setting.

2. Clinical Case Definition

In the absence of laboratory confirmation of *M. tuberculosis* complex after a diagnostic process has been completed, persons must have all of the following criteria for clinical tuberculosis:

- Evidence of tuberculosis infection based on a positive tuberculin skin test, **AND**

- An abnormal unstable (worsening or improving) chest radiograph, **AND/OR**
- Evidence of current tuberculosis disease (e.g., fever,, night sweats, cough, weight loss, hemoptysis), **AND**
- Receive treatment with two or more antituberculosis medications .

II. ACTIONS REQUIRED / PREVENTION MEASURES

A. KENTUCKY DISEASE SURVEILLANCE REQUIRES PRIORITY NOTIFICATION: REPORT TO THE LOCAL OR STATE HEALTH DEPARTMENT within 1 business day upon recognition of a case or suspected case.

B. EPIDEMIOLOGY REPORTS REQUIRED:
- Kentucky Reportable Disease Form - EPID 200 (Rev. Jan/03).
  The following form will be sent to the Department for Public Health by the LHD upon confirmation of a confirmed case:
- Report of Verified Case of Tuberculosis (CDC 72.9 A and B; Rev 01/2003).

C. PUBLIC HEALTH INTERVENTIONS:
- For patients with pulmonary and laryngeal tuberculosis, control of infectivity is best achieved by prompt specific drug therapy.
- Patients must remain isolated (at home or in a negative pressure room designated for TB patients) until three consecutive smears are negative for AFB from sputum specimens collected on different days, **AND** the patient has been on appropriate therapy for at least two weeks, **AND** there is evidence of clinical improvement.
- Investigation of known contacts and source of infection.
- Initial tuberculin testing of all household members and other close contacts, with repeat skin testing of those with negative skin tests 90 days post exposure.

III. CONTACTS FOR CONSULTATION

A. LOCAL HEALTH DEPARTMENT TB COORDINATOR

B. DEPARTMENT FOR PUBLIC HEALTH, TUBERCULOSIS CONTROL PROGRAM: 502-564-4276.

IV. RELATED REFERENCES

1. Centers for Disease Control and Prevention. Core Curriculum on Tuberculosis, 3rd Edition.

2. Diagnostic Standards and Classification of Tuberculosis in Adults and Children. American Journal Respiratory Critical Care Medicine. 2000; 161:1376-1395. Internet address: www.atsjournal.org

3. American Thoracic Society. Treatment of Tuberculosis and Tuberculosis Infe ction in Adults and Children. Am. J. Respir. Crit. Care Med. 1994; 149:1359-1374.

4. American Thoracic Society. Control of Tuberculosis in the United States. Am. Rev. of Resp. Diseases, Vol. 146, No. 6 December 1992, pp. 1623-1633.